REMARKS

As a result of the foregoing amendment, the claims have been amended in a manner which clearly obviate the formal rejections raised by the Examiner. In particular, the typographical error has been corrected and the expression "consisting essentially of" has been changed to "comprises the steps of". Accordingly, the formal objection should be withdrawn.

Reconsideration and withdrawal of the rejection of claims 1-8 as being unpatentable under 35 USC 102 (e) over the Mathies et al '671 patent are requested. The examiner states that all of the steps of the detection method of the present invention as claimed are taught in Mathies et al. However, it is submitted that this is not, in fact, the case. In particular, there is nothing in this reference which discloses nor remotely suggests step c).

As recited in the claims, step c) requires:

> Bringing the mixture into contact with an electroconductive microarray having plural electrodes onto which probe molecules complimentary to the nucleic acid fragments are fixed, so that hybridization between the nucleic acid fragments having electroconductive labels and the probe molecules on the electroconductive microarray can proceed to form hybrid structures on electrodes.

Clearly, the electroconductive microarray of the present invention has plural electrodes onto which probe molecules which are complimentary to the nucleic acid fragments are fixed. The examiner states that this step is taught and Mathies et al, referring to the descriptions at column 8, lines 59 to column 9, line 6 and column 10, lines 46-55 and Fig. 1.

The description at column 8, line 55 to column 9, line 6 refers to combinations of labels used with the coating scheme and Fig. 6. Therefore, this description does not relate to a microarray.

The description referred to at column 10 reads as follows:

> Another advantage of these low molecular weight labels is that when conjugated to a primer they do not present any steric or other hindrances for the amplification of DNA fragments that the primer or oligonucleotide is hybridized to during the PCR or any other amplification extension or ligation process of a 735 bp anabena DNA fragment insert closed into a vector after PCR amplification with a M-13 forward primer labeled with redox label 1 and unlabeled M-13 reverse primer.

Clearly, this description is for PCR or another amplification extension to be used to prepare the test samples and does not relate to the microarray.

Clearly, Fig. 1 does not teach a microarray having probe molecule complementary to the sample nucleic acid fragments fixed thereon.

Apparently, the examiner construes the disclosure as being that the working electrodes or detection electrodes correspond to the presently claimed microarray. Note that the working electrodes are illustrated in Fig. 1 and Fig. 12. The explanation for Fig. 1 is provided at column 6, lines 47-54. However, there is no description for a "fixed probe molecule complimentary to the nucleic acid fragment" therein.

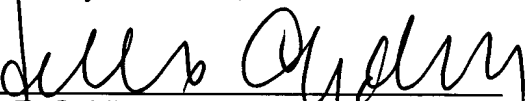
The explanation for the working electrode i.e., a detection electrode, of Fig. 12 is provided at Column 11, lines 52-60. There appear to be no descriptions for a "fixed probe molecule complementary to the nucleic acid fragments" at this point either.

Thus, Mathies et al contains no description that the working electrode or detection electrodes have probe molecules which are complimentary to the sample nucleic acid fragments fixed thereon, so that the hybridization between the sample nucleic acid fragments having electroconductive labels and the probe molecules on the electroconductive microarray can proceed to form hybrid structures on the electrodes.

Clearly the Mathies et al reference relied on by the examiner is silent with respect to the use of a microarray having the probe molecules which are complementary to the sample nucleic acid fragments which are fixed thereon to allow the hybridization between the sample nucleic acid fragments having the electroconductive labels and the probe molecules on the electroconductive microarray to proceed to form hybrid structures on the electrodes. Without such disclosure, this reference cannot anticipate the present invention, and the rejection on this basis is improper and should be withdrawn.

In view of the foregoing it is submitted that this application is in condition for allowance and favorable reconsideration and prompt notice to that effect are earnestly solicited.

Respectfully submitted,



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